

ABSTRACT OF THE DISCLOSURE

A method for the production of polyetherols is disclosed. The method includes the utilization of aluminum phosphonate catalysts for the formation of the very low unsaturation polyether polyols. The aluminum phosphonate catalyst preferably has a general structure of

5 RPO-(OAlR'R'')<sub>2</sub>, wherein O represents oxygen, P represents pentavalent phosphorous, Al represents aluminum, R comprises a hydrogen, a methyl group, an alkyl group, or an aryl group, and R' and R'' independently comprise a halide, an alkyl group, an alkoxy group, an aryl group, or an aryloxy group. Polyols produced according to the disclosed procedure have properties identical to or more beneficial than those produced utilizing the typical base

10 catalysts.

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